

THE PHILIPPINE MOLLUSKS OF THE GENUS DIMYA.

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During the cruise of the United States Fisheries steamer *Albatross* in the Philippines a number of mollusks belonging to the genus *Dimya* were obtained at several of the deep-sea stations which are here described.

Most of the known members of this genus are fossils, only two having been described as now existing species. These are *Dimya argentea* Dall<sup>1</sup> from the West Indies and *Dimya corrugata* Hedley<sup>2</sup> dredged off New South Wales.

To these two additional species are now added.

DIMYA FILIPINA, new species.

Plate 28, figs. 1-4.

Shell heavy, inequivalve, of variable outline, depending upon the nature of the support to which the basal valve is attached. Outside of upper valve brown, marked by strong closely spaced overlapping concentric laminations which are free at their edges. These laminations are present on the prodissoconch and increase steadily in size from this to the edge of the adult shell. Radiating sculpture entirely wanting. In the lower valve which is much stronger than the upper, the laminations assume the form of moderately strong corrugations. In this the external surface is marked with radiating zones of chestnut brown which are about one-third as wide as the light area that separates them. The interior of the shell is pale buff; the material of this color forms a thin layer in the dorsal valve which readily flakes away, exposing a chestnut colored basal layer. Resilium resting in a strongly excavated pit in the dorsal valve, bending under a little shelf

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<sup>1</sup>Bull. Mus. Comp. Zool., vol. 12, 1886, p.228.

<sup>2</sup>Mem. Austr. Mus. Sydney, vol. 4, 1902, pp. 308-309.

in the ventral valve. On each side of the resilium, bending outward and downward, is the provincular area, which in the ventral valve is lightly raised and transversely feebly notched; in the dorsal it is impressed, bearing slender cross bars. Muscular scars very large. Edge of shell outside of pallial line roughened on the dorsal third.

The type and about 68 loose valves, mostly upper, Cat. No. 246281. U.S.N.M., were dredged at station 5217, in 105 fathoms, off Anima Sola Island (lat.  $13^{\circ} 20' N.$ ; long.  $123^{\circ} 14' 15'' E.$ ), on coarse gray sand bottom; bottom temperature,  $63.1^{\circ}$ ; density at bottom, 1.02496. The measurements of the type are as follows: Lower valve, altitude 11 mm., latitude 12 mm.; diameter at ventral edge 5 mm.; dorsal valve, altitude 9 mm., latitude 10 mm., thickness probably 1 mm.

*DIMYA LIMA*, new species.

Plate 27; Plate 28, figs. 5 and 6.

Shell large but much thinner than *Dimya filipina*, white with a silvery nacreous suffusion. In adult shells the edge beyond the pallial ridge curves up and lends the shell a dished appearance. Lower valve very thin at the point of attachment, where it is quite translucent; the rest of its exterior, excepting the extreme edge, which is hyaline, is milk white and polished, showing fine, irregular lines of growth. The exterior of the upper valve is almost smooth during the early stages, but sculptured with roughened irregular flake-like squamations (not strong laminations as in *filipina*), and a few well incised, irregularly spaced, radiating lines on the latter two thirds. Interior bluish white, the edge outside of the pallial line nacreous. Resilium resting in a small pit, which is partly roofed over by a thin shelf, dorsally, in both valves. Radiating outward and downward on each side of the resiliar pit is the provincular area, which appears in both valves as a transversely roughened ridge, fusing ventrally with the considerably thickened pallial border. The latter is crossed by strongly impressed radiating grooves in the upper valve, that correspond to an equal number of raised threads in the lower valve.

The type and many other specimens were dredged at station 5533, off Balicasag Island (lat.  $9^{\circ} 27' 15'' N.$ ; long.  $123^{\circ} 31' 48'' E.$ ), in 432 fathoms, on green mud and sand bottom; bottom temperature  $53^{\circ}.3$ . All of these were attached to shells of *Lima (Callolima) smithi* Bartsch. The type, Cat. No. 256977, U.S.N.M., measures: Altitude 13.5 mm., latitude 15.5 mm.

Additional specimens were obtained at the following stations:

On *LIMA (CALLOLIMA) SMITHI* Bartsch.

Station 5124, off Point Origon (lat.  $12^{\circ} 52' 00'' N.$ ; long.  $121^{\circ} 48' 30'' E.$ ), in 281 fathoms, on soft green mud bottom. Cat. No. 256978, U.S.N.M.

On LIMA (*CALLOLIMA*) *DALLI* Bartsch.

Station 5135, off Jolo Light (lat.  $6^{\circ} 11' 50''$  N.; long.  $121^{\circ} 08' 20''$  E.), in 161, fathoms on fine coral sand bottom; bottom temperature  $57^{\circ}.4$ . Cat. No. 254980, U.S.N.M.

Station 5198, off Baliscasag Island (lat.  $9^{\circ} 31' 50''$  N.; long.  $123^{\circ} 39' 45''$  E.), in 220 fathoms, on green mud bottom; bottom temperature  $53^{\circ}.9$ ; density of water at bottom 1.02500. Cat. No. 256975, U.S.N.M.

Station 5371, off outer Tayabas Light (lat.  $13^{\circ} 49' 40''$  N.; long.  $121^{\circ} 40' 15''$  E.). Sounding not made; depth taken from chart which says 83 fathoms. (This is probably incorrect, for all the other Giant Limas were taken at much greater depth.) Bottom, green mud. Cat. No. 254978, U.S.N.M.

Station 5503, off Macubalan Point Light, Mindanao (lat.  $8^{\circ} 36' 26''$  N.; long.  $124^{\circ} 36' 08''$  E.), in 226 fathoms, on green mud bottom; bottom temperature  $53^{\circ}.3$ . Cat. No. 254976, U.S.N.M.

Station 5516, off Point Tagolo Light, Mindanao (lat.  $8^{\circ} 46' 00''$  N.; long.  $123^{\circ} 32' 30''$  E.), in 175 fathoms, on globigerina bottom; bottom temperature  $54^{\circ}.3$ . Cat. No. 254974, U.S.N.M.

Station 5519, off Point Tagolo Light, Mindanao (lat.  $8^{\circ} 47' 00''$  N.; long.  $123^{\circ} 31' 15''$  E.), in 182 fathoms, on globigerina and sand bottom; bottom temperature  $54^{\circ}.3$ . Cat. No. 254979, U.S.N.M.

## On cinders and empty bottom.

Station 5243, off Uvian Island (lat.  $6^{\circ} 50' 55''$  N.; long.  $126^{\circ} 14' 35''$  E.), in 281 fathoms, on gray mud bottom; bottom temperature  $63^{\circ}.6$ ; density at bottom, 1.02468. Cat. No. 229321, U.S.N.M.

Station 5282 yielded some loose valves, off Malavatuan Island (lat.  $13^{\circ} 53' 00''$  N.; long.  $120^{\circ} 26' 45''$  E.), in 248 fathoms, on dark gray sand; bottom temperature  $47^{\circ}.4$ ; density at bottom, 1.02517. Cat. No. 230109, U.S.N.M.

## EXPLANATION OF PLATES.

## PLATE 27.

*Dimya lima* Bartsch on *Lima (Callolima) smithi* Bartsch. The specimen with the arrow is the type.

## PLATE 28.

All figures enlarged three diameters.

- Fig. 1. *Dimya filipina*, external view of lower valve.  
 2. *Dimya filipina*, external view of upper valve.  
 3. *Dimya filipina*, internal view of upper valve.  
 4. *Dimya filipina*, internal view of lower valve.  
 5. *Dimya lima*, internal view of upper valve.  
 6. *Dimya lima*, internal view of lower valve.